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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,141	09/23/2003	Sherif Yacoub	200300101-1	2017
22879	7590	04/17/2007	EXAMINER	
HEWLETT PACKARD COMPANY			SAINT CYR, LEONARD	
P O BOX 272400, 3404 E. HARMONY ROAD			ART UNIT	PAPER NUMBER
INTELLECTUAL PROPERTY ADMINISTRATION				
FORT COLLINS, CO 80527-2400			2626	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/17/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)
	10/668,141	YACOUB, SHERIF
	Examiner Leonard Saint-Cyr	Art Unit 2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
 - 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) Notice of Informal Patent Application
- 6) Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 –5, 8 – 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Murveit et al., (US Patent 7,058,573).

As per claims 1, 8, and 14, Murveit et al., teach an automatic speech recognition (ASR), that comprises:

receiving a speech utterance from a user; assessing resources of a plurality of different ASR engines (“multi-pass speech recognition”; col.2, lines 1 – 4);
assigning the speech utterance to a single ASR engine if assessing resources is within a threshold value (col.3, lines 4 – 6);
assigning the speech utterance to a plurality of different ASR engines if assessing resources is within a threshold value (“the results of the first pass are insufficient to correctly identify the spoken input, a second pass speech recognition is performed”; col.2, lines 64 – 67); and

generating text (“output recognized words”) of the speech utterance with either the single ASR engine or plurality of ASR engines (col.9, lines 57 – 60).

As per claims 2, and 9, Murveit et al., further disclose monitoring port utilization for each ASR engine (“certainty higher than a predetermined threshold, a second pass is not performed”; col.3, lines 4 – 7).

As per claims 3, and 10, Murveit et al., further recite evaluating processing power (col.2, line 23).

As per claim 4, Murveit et al., further disclose monitoring memory utilization and input/output utilization (“beginning the second pass by removing the spoken input from the buffer beginning with the starting address...”; col.8, lines 48 – 55).

As per claim 5, Murveit et al., further disclose monitoring a number of users providing speech utterances (“distinguish the callers channel type”; col.7, lines 17, and 18).

As per claim 11, Murveit et al., further disclose combining results of ASR engines if the group of ASR engines is selected, the group of ASR engines being adapted to provide a more accurate recognition of the utterance than a single ASR engine (“performs a second pass speech recognition technique on the spoken input according

to the first pass results”; col.2, lines 62 – 64).

As per claim 12, Murveit et al., further disclose evaluating resources of the system evaluates resources to simultaneously run multiple ASR engines (“simultaneously performed”; col.9, lines 51 – 56).

As per claim 13, Murveit et al., further disclose evaluating resources of the system evaluates ASR ports, system resources (“beginning the second pass by removing the spoken input from the buffer beginning with the starting address...”), and call handlers (“distinguish the callers channel type”; col.7, lines 17, and 18; col.8, lines 48 – 55).

As per claim 15, Murveit et al., further disclose selecting an ASR engine that has most available resources (“a first pass is assigned a certainty that is higher than a predetermined threshold, a second pass is not performed”; col.3, lines 4 – 7).

As per claims 16, and 17, Murveit et al., further disclose a telephone network comprising at least one switching service point coupled to the computer system, wherein at least one communication device in communication with the switching service point to provide the speech utterance (“telephone system”; col.4, lines 26, and 27).

As per claims 18 - 20, Murveit et al., further disclose that the resource management application comprises a recognition proxy component and a resource monitoring component, wherein the resource management component collects and analyzes information about the resources available on the system, and wherein the resource monitoring component mediates between the plurality of ASR engines and the resource management component ("determination is made as to characteristics of the spoken input based upon the results of the first pass; this determination is then utilized to select a most appropriate speech recognizing system; col.7, lines 3 – 14).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murveit et al., (US Patent 7,058,573).

As per claim 6, Murveit et al., do not specifically teach assigning the speech utterance to a single ASR engine if assessing resources is within a threshold value occurs when port utilization of the single ASR engine is lower than a port utilization threshold of about 80%.

However, since Murveit et al., teach that if one of the expressions identified by the first pass is assigned a certainty that is higher than a predetermined threshold (e.g.

95%), a second pass is not performed. The predetermined threshold can be set at a certainty of ninety-five percent, though it will be apparent that the predetermined threshold can be set at another level (col. 3, lines 4 – 7; col.5, lines 53 – 56). One having ordinary skill in the art would find it obvious to assign the speech utterance to a single ASR engine if assessing resources is within a threshold value occurs when port utilization of the single ASR engine is lower than a port utilization threshold of about 80% within Murveit et al., because that would maintain a high degree of recognition accuracy in the speech recognition system (col.2, lines 32 – 34).

As per claim 7, Murveit et al., do not specifically teach assigning the speech utterance to a plurality of different ASR engines if assessing resources is within a threshold value occurs when port utilization of two ASR engines is lower than a predefined threshold of about 75%.

However, since Murveit et al., teach that if the results of the second pass are not sufficiently definite, yet another pass can be performed; one, two or more speech recognition passes are selectively performed accordingly to results of a prior pass (col.12, lines 57 – 59; col.13, lines 15 – 17). One having ordinary skill in the art would find it obvious to assign the speech utterance to a plurality of different ASR engines if assessing resources is within a threshold value occurs when port utilization of two ASR engines is lower than a predefined threshold of about 75% within Murveit et al., because that would maintain a high degree of recognition accuracy in the speech recognition system (col.2, lines 32 – 34).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Baker (US Patent 6,122, 613) teaches a speech recognition using multiple recognizers (selectively) applied to the same input sample.

Murveit et al., (US Patent 6,766, 295) teach an adaptation of a speech recognition system across multiple remote sessions with a speaker.

Sharma (US PAP 2003/0236664) teaches a multi-pass recognition of spoken dialogue.

Brookes et al., (US Patent 7,184,957) teaches a multiple pass speech recognition method and system.

Johnson (US Patent 6,728,671) teaches an automatic speech recognition caller input rate control.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard Saint-Cyr whose telephone number is (571) 272-4247. The examiner can normally be reached on Mon- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LS
04/03/07



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SUPERVISORY PATENT EXAMINER